

Charting a New Direction: Results of the ACUBE Member Survey

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Abstract: The ACUBE Steering Committee and President conducted an online survey of members from November 2007-January 2008. The survey asked members for input on a variety of issues facing ACUBE, ranging from participation in the association to satisfaction with annual meetings, *Bioscene*, and the webpage. The survey was completed by 34% of the membership resulting in 34 pages of data and comments. A preliminary report was delivered at the 2008 Annual Meeting at Hopkinsville Community College; this document is intended to provide more details about the results and inform members who were unable to attend the annual meeting. Based on the results of the survey, the Steering Committee has approved four goals for a still developing Strategic Plan for ACUBE. The Strategic Plan is a work in progress and will rely heavily on results from the member survey. This report provides a suggestion of where ACUBE may be headed in the future as that Plan continues to develop.

Keywords: ACUBE, survey, strategic plan

Introduction

The Association for College and University Biology Educators (ACUBE) has benefited from a dedicated membership committed to promoting biology education as demonstrated by the 50th anniversary of the society in 2007. In 1957 there were 44 members from 11 Midwestern states. In 1997 the name of the society was changed from the Association of Midwest College and Biology Teachers to its current name as a reflection of the growing national membership. In 1998 the society had grown to 340 members from 30 states. Today there are 270 active members who are diverse in many ways, including: stage of career, type of institution employed at, field of biology trained in. However, the membership of the society is a very small portion of the estimated 65,000 biologists who teach at post-secondary institutions in the United States (Bureau of Labor Statistics, 2008). While ACUBE has never sought to capture all biology educators as part of its membership, or to be the largest biology related society, it does seek to serve its constituency through the following objectives as stated in the constitution of the organization:

- 1) To further the teaching of the biological sciences at the college and other levels of educational experience;
- 2) To bring to light common problems involving biological curricula at the college level and by the

free interchange of ideas; endeavor to resolve these problems;

3) To encourage active participation in biological research by teachers and students in the belief that such participation is an invaluable adjunct to effective teaching;

4) To create a voice which will be effective in bringing the collective views of the college and university teachers of the biological sciences to the attention of college and civil government administrations.

As ACUBE enters its second 50 years, the society is facing many questions about the future of the society, as outlined by current ACUBE President, Conrad Toepfer, in his letter published in *Bioscene* in December 2007. These issues include maintaining and increasing membership and increasing the impact of ACUBE in biology education. The steering committee led small-group discussions of these issues over lunch at the annual meeting at Loras College in October 2007. From these initial discussions, a decision was made to collect more feedback from the society. This article is a summary of the results from that survey, and reflections from the steering committee of ACUBE about priorities for the next few years to meet the expectations of the members and the goals of the organization.

A link to the electronic survey was sent to the all members in November 2007. The anonymous

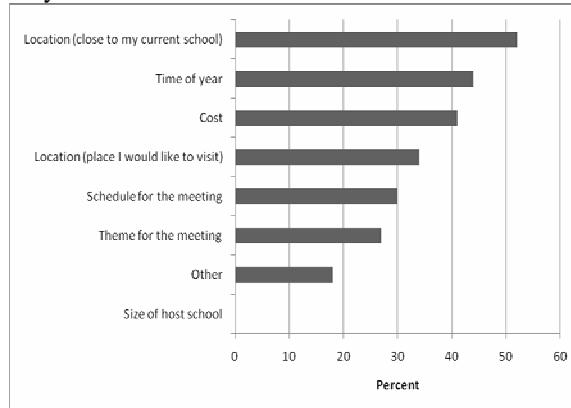
survey was available for six weeks, and a reminder was sent to all members in December 2007. Thirty-four percent of the ACUBE members completed the 27-question survey.

Results

Information on Survey Respondents:

Forty-one percent of survey respondents have been members for less than five years. Thirty-four percent of those who participated in the survey have been members for over ten years. Even with a large number of respondents who have been members for a significant length of time, only 10% of respondents have been to four or five annual ACUBE meetings in the last five years. Almost 40% of respondents have not been to any ACUBE annual meetings in the last five years. Sixty-four percent of survey respondents indicate that they are in a tenure-track or tenured position at a college or university. Other job titles included: retired (15%), full-time instructor (8%), adjunct or part-time instructor (2%), graduate student or post-doc (2%), or other (9%). The job titles in the “other” category included administrators (or part-time administrators), librarians, and limited-term professors. Sixteen percent have served on the *Bioscene* editorial board.

Figure 1. Factors determining attendance at the ACUBE annual meeting. The survey question asked: “Which of the following is an important factor in your decision to attend the ACUBE annual meeting? (select all that apply)”



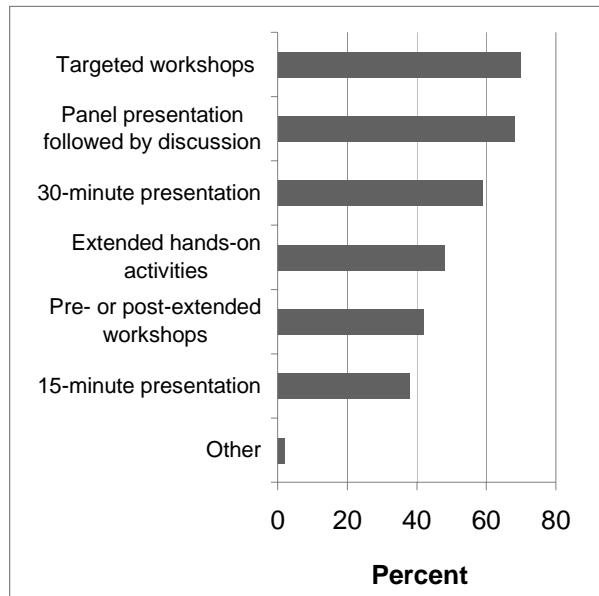
Overwhelmingly, 90% of members agree that 45-minute talks at the annual meeting is an effective presentation type. Only 15% of respondents agree that the 90-minute talks are effective. The keynote address and poster presentations were

and 34% have participated in the governance of ACUBE at some point during their membership. Approximately one-third of the survey respondents have submitted an article to *Bioscene* for publication. Annual Meeting

Members most frequently indicated that the location of the ACUBE annual meeting is an important factor in their decision to attend, followed by the time of year of the meeting, and the cost of attendance (Figure 1). In the “other” category, several members indicated that time for interactions is an important factor, particularly for members who have been part of the society for many years (including founding members). The theme for the meeting was only selected by 27% of respondents as an important factor in their decision to attend the meeting. This is particularly surprising because 52% of respondents indicated that “content” was the best thing about the annual meeting. Thirty percent of respondents indicated that interactions with colleagues were the best thing about the meeting. Only 4% indicated that the current “tone/style” of the meeting was the best feature of the annual meeting. Two-thirds of the respondents indicated that they had presented at an annual meeting in the past.

equally supported by 42% of attendees as effective presentation types. Overall, the survey respondents are supportive of trying new presentation types, including targeted workshops, panel presentations, and shorter presentations (Figure 2)

Figure 2: Suggestions for new presentation types at the ACUBE annual meeting. The survey question asked: “It has been suggested that we try new presentation types in the future at the ACUBE annual meeting. Which of the following would you find useful in delivering information (select all that apply) “



ACUBE members were asked to give their opinion on changes to the annual meeting including location, time of year, and methods of advertisement. These results are summarized in Table 1. Overall, the membership appears supportive of changes to the annual meeting, except altering the Thursday-Saturday schedule. Ideas that received the strongest support (in terms of percent who indicated that they

agreed or strongly agreed that the following should be done to improve the annual meeting) included devoting an issue of *Bioscience* to the meeting theme, advertise to increase the number of people attending the meeting, announcing meeting locations two years in advance, and advertise to bring in more graduate students

Table 1: Survey respondents were asked to give their opinions on possible changes to the annual meeting (scale ranged from strongly agree to strongly disagree). Percents for “agreed and strongly agreed” were combined, as were “disagreed or strongly disagreed”, as shown on the below. Suggestions are ranked in descending order based on the percent of respondents who agreed with each statement.

Possible changes to ACUBE annual meeting	Agree or strongly agree	Neutral	Disagree or strongly disagree
Devote a <i>Bioscience</i> issue per year to the meeting theme, giving presenters the option of publishing	86	11	3
Increase advertising to increase the number of people who attend the meeting	85	11	4
Announce the meeting locations two years in advance	81	12	7
Advertise to bring in more graduate students	80	12	8
Announce the themes for the meeting earlier in the year	66	26	8
Alternate meetings between large cities and small cities	64	18	18
Hold the meeting in more convenient locations near a major airport	62	27	11
Post a board on the website for ride sharing to the meeting	56	38	6
Alternate meetings on a two year cycle; regional meetings one year, national meeting the next	55	28	17
Offer travel funds to junior faculty	53	27	20
Hold meetings outside of our current range	48	20	32
Decrease the registration fee for first time attendees	48	35	17
Move meetings to larger cities	45	17	38
Change current Thursday-Saturday schedule	11	34	55

When asked what locations were suggested for future ACUBE meetings, there were no clear

trends. Several respondents indicated that they would like the meeting in locations that are easier to get to (nearer to a major airport), however there was

also support for keeping the meetings on college campuses rather than in hotels. Several individuals ask that the meeting be held outside of the Midwest, however many suggested locations in the Midwest (Madison, Minneapolis, Kansas City were mentioned several times). Two quotes from members on how to improve the annual meeting:

- “As a first-timer, it would have been helpful to have been contacted by someone in ACUBE prior to the conference to talk about logistical concerns such as "dress code" for events, customary method of presentation, etc. Also, it would be nice to have a least one familiar person to find at the beginning of the conference. ABLE has a breakfast session on the morning of the first day for first-timers. Members of the board explain what can be expected, answer any questions, and give suggestions. “
- “Discussions with colleagues are an important part of the meeting and I would like to see more opportunities for 'round-table' discussions of various teaching topics.”

Other suggestions included increasing the attendance to get more energy and new ideas, hold the meeting in conjunction with other societies some years, recruiting more post-docs to attend and hold the meeting at a different time of year (because of many conflicts in October).

ACUBE website

Thirty-five percent of survey respondents indicated that they find the ACUBE website useful. It is telling however, that 57% have not used the website recently. Members were asked to indicate what they found the most useful about the website for the society, and overwhelmingly access to *Bioscene* was mentioned as the most useful feature. Several others indicated that the website is useful because it is uncluttered, and easy to find information about the annual meeting. Adding a calendar of events to the website was supported by 80% of members who participated in the survey. In addition, support was present for links to related sites and employment opportunities. A “members only” area of the website was only recommended by 11% of members.

Bioscene

Two thirds of the members who participated in the survey had not submitted a paper for publication in ACUBE. Lack of time to prepare a submission was cited by 42% of the individuals as the reason they had not yet published in ACUBE. Only 7% indicated that they preferred to publish in another journal. Most members (88%) use *Bioscene* to get teaching ideas primarily, with 52% indicating

that they use *Bioscene* to get information on the annual meeting. Other comments on the uses of *Bioscene* include: giving them to high school teachers as resources, following trends in biology education, and to keep up with the business of ACUBE.

Members were asked to indicate if they would like to see additional features in *Bioscene*. A section devoted to columns describing useful websites was supported by 71% of members, a section for undergraduate research articles was supported by 58%, and book reviews were supported by 53% of members. Other ideas included: having targeted issues on themes, textbook reviews and critiques, articles on industry connections, articles on grant opportunities and grant writing. Some concern was expressed about website reviews, indicating that websites are frequently changed or removed, making the article not applicable in a short time. It was suggested that this might be more suitable for an e-newsletter.

No clarity was given by the membership about the future format of *Bioscene* (print, online or both). Thirty four percent of members indicated that they preferred to receive *Bioscene* in print, 33% preferred online, and 33% preferred both formats. However, 58% of members indicated that they would be willing to get *Bioscene* only in an online format in exchange for other services from ACUBE (24% indicated it depended on the service offered). One suggestion was to make individuals who get paper copies pay more for their memberships. Forty-eight percent of members do not see the need to print a full run of *Bioscene* on a CD, however 25% said they would use the CDs to find articles, and 18% said they would give the CDs to recruit new members.

ACUBE Membership

Over 60% of members indicated that they first learned about ACUBE from a colleague, confirming the importance of networking to the organization. Twenty percent first learned about the organization through a flier. Members were asked if they agreed or disagreed with a number of ideas for increasing membership in the society. These results are summarized in Table 2. Overall, members supported networking with other societies to make sure our webpage is a resource to their members. In addition, advertising at other professional conferences and publications was thought to be useful in increasing membership. Some ideas from members on how to increase membership included:

- “Need to increase the “name brand” of the society. Needs to grow to truly be a national organization”
- “Invite high school science teachers that offer college advanced credit or advanced

- placement courses on their high school campuses”
- “Offer “departmental” memberships to promote more members of departments to participate and also offer “multi-year”
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Table 2: Survey respondents were asked to give their opinions on possible strategies to increase membership. Percents for the responses “useful and very useful” were combined, as were “don’t know and no effect”, as shown on the below. Suggestions are ranked in descending order based on the percent of respondents who thought the recruiting mechanisms may be useful.

Possible changes to ACUBE annual meeting	Very useful or useful	Not useful	No effect or don’t know
Make sure our website is listed as a link on other professional websites	94	1	5
Advertise at other professional conferences	87	3	10
Recruit graduate students by contacting graduate student organizations	78	4	18
Encourage members to give a presentation or display information at other conferences	77	2	21
Develop a small ad to go into professional publications	74	6	20
Alternate years with regional/national meeting	46	6	48
Have a member recruitment contest	26	19	55

Members were asked what services they thought would be beneficial in increasing their satisfaction with ACUBE. All suggestions received support from the members. The ideas that has the greatest percent of members indicating that they thought the service would be “very beneficial” in increasing their satisfaction with ACUBE were: more advocacy by ACUBE on educational issues, travel grants for faculty to attend ACUBE, and mini-grants offered on a competitive basis for pedagogy ideas. Other services that could be offered by ACUBE to its members included: access for members for lab and class activities, grant resources, list of members and expertise areas, informational newsletters via email, a listserve to share ideas and discuss problems, service to review manuscripts or grants.

Comments from “new” members of ACUBE (less than three years) were solicited about their opinions of ACUBE and how the organization can retain them as members:

- “I am drawn to the organization because of the teaching-centered approach to the meetings and publications.”
- “It seems to have a unique niche potential as an advocate nationally for biology education, and I would like to see that expanded.”
- “ACUBE is very welcoming and has lots of valuable information in *Bioscene* and at the meetings. The low cost is very attractive.”
- “I like that that association has a journal. Build the journal. Find a way to promote the submission of more articles and publish more frequently.”

memberships (at a slightly reduced cost) so people may be more likely to keep their membership active”

Comments from members who have been with ACUBE for over three years about how ACUBE can stay valuable during their career:

- “There isn’t a comparable society that focuses on biology education at the college level. I think the opportunities for *Bioscene* as a journal will keep me a member - and improvements to the annual meeting. I would like the society to really become a “national” society. Many people have never heard of ACUBE who are biology teachers.”
- “The atmosphere of learning and cooperation. I feel like the annual meeting is somewhere I can go to get new ideas and get re-energized about teaching biology.”
- “The pedagogical focus of annual meetings and articles in *Bioscene* is what I find valuable; keep that and you keep me.”

All members, regardless of the time they have been part of the organization were asked which issues are critical to keep the same, and which issues/parts are critical to change. While very diverse answers were given, some themes emerged from the submissions. First, members think it is critical to keep *Bioscene* as part of the organization, and continue to strengthen the journal. Second, the organization needs to increase the size and expand its reputation and reach. Third, it is important to members that we keep a low cost of membership. Lastly, it is important to keep a collegial environment at the meetings and plenty of opportunities for networking. Members were asked to identify the most important issue for the organization to address in the near future. The suggestions that were

repeated the most frequently were to strengthen the size and reputation of the organization through advocacy, advertising, cooperation with other societies and continue to publish a strong journal.

Participation in the Governance/Activities of ACUBE

Thirty-eight percent of survey respondents indicated that they did not know enough about the governance of ACUBE to indicate if they would be willing to participate in some way. Forty percent expressed willingness to serve on the *Bioscene* editorial board. Only 19% indicated that they would be unwilling to participate in the governance of ACUBE. Time was listed at the major limiting factor for most members for getting more involved in ACUBE. Eleven percent indicated that the travel commitment (both time and funds) would prevent their participation in the governance of the organization.

Discussion

The strength of ACUBE since its founding as AMCBT has been the members. The expertise and creativity that we as individuals bring to our classrooms have undoubtedly influenced generations of college biology students. Participation in ACUBE either through attending the annual meeting or publishing in *Bioscene* allows each of us to continue to improve our individual skills. However, collectively we should be able to accomplish even greater things. The major themes of increasing membership, becoming advocates for education, and communicating the best teaching ideas to each other have been recurring since the founding of ACUBE over fifty years ago. Our task should be to critically examine what we are as an association and begin to plan what we want to be in the future. The membership survey was an attempt to begin a critical examination, and the Steering Committee likely will be returning to the 34 pages of data again and again in the coming months. You as members had a lot to say about the current and future state of ACUBE. The governance of ACUBE will do its best to address many of your concerns and suggestions over the course of the next year.

The member survey was organized around four themes: membership, the face of ACUBE (*Bioscene* and the webpage), the Annual Meeting, and the larger role of ACUBE in biology education. While efforts for developing a long-range Strategic Plan are in their infancy, a few events have already developed and discussions are underway to determine if and how our approach to these issues should be adjusted.

Membership

Membership levels in ACUBE appear to have been cyclical since our founding, and the

discussion of what to do to increase membership has also been a virtual constant. The survey shows rather dramatically that most of us were recruited by colleagues. We can always work on members of our departments, but we need to always keep ACUBE in our thoughts as we participate in other venues. It is likely that all of us participate in at least one other society and attend a variety of conferences, summits, etc. where we may run into receptive peers. There can be no better advocate for the association than a satisfied member. To aid you in recruitment of your peers at other meetings one of the Steering Committee members, Tara McGinnis, developed three different recruitment posters. All three posters are available on the ACUBE website; please feel free to print them off and hand them to colleagues.

One of the potential limitations in our recruiting is visibility. The top choices in the survey involved strategies that should be relatively easy to implement. We currently are listed as a member of AIBS and have our website cross-linked with the websites for the Association for Biology Laboratory Education (www.ableweb.org) and the Association of Southeastern Biologists (www.asb.appstate.edu)...dig deep enough in their sites and you will find our association. Clearly we can do better than this. There are a number of websites that should have a link to ACUBE, an omission that should be easy to remedy.

We know that ACUBE is valuable to us either through presentations, *Bioscene* papers, or conversations over a meal at the Annual Meeting. Many members who have joined in recent years have commented that they had no idea that ACUBE existed before chatting with one of our members. Our challenge will be to make sure that even more faculty become aware of the existence of the association and recognize how valuable it is to each of us as we continue to strengthen our teaching.

Public face

Nonmembers of ACUBE are most likely to gain their first exposure to the association through either *Bioscene* or the website. We need to be sure that both resources continue to be high quality as they could serve as recruitment tools in addition to their continued value for members. *Bioscene* appears to serve two main purposes for members, a source of teaching ideas and providing information about the annual meeting. Both functions should be equally useful. *Bioscene* has a long tradition as a high-quality publication but various challenges with journal production will make it increasingly difficult to maintain its current quality. Some adjustments can be made fairly quickly and easily. For example, the current editor, Steve

Daggett, is open to increasing the diversity of material in the journal. Material such as letters to the editor and book reviews are encouraged and additional material is welcome. A greater challenge, however, is the rapid increases in both printing and mailing costs. In January 2008, it became clear that the organization would have difficulty covering expenses for a full 4-issue run of the journal during the year. Shifting to either partial or complete online publication brings its own challenges. The June 2008 issue of *Bioscene* is currently available online. For at least the next two years, *Bioscene* will be available only in to two issues a year with one issue published online in the early summer and a second print issue published at the end of each year.

The website is a similar bridge between members and nonmembers and could serve as a recruiting tool for the organization. Members use the site primarily for accessing information about the annual meeting and back issues of *Bioscene*. Both topics would be useful for nonmembers, but we do need to consider how the site appears to those not already "in the know" about our organization. Is our site compelling enough for people not already familiar with the organization? Does its appearance reflect an organization with plans for the future or one that is comfortable with the way we've always done things? Our website may be the first thing a prospective member sees so we should be cognizant of how it reflects the entire organization. We individually know why we joined and remained in ACUBE, are we presenting those aspects to those who are not already members?

Another continuing challenge is the difficulty of managing the site with a group of volunteers. Bobby Lee and Tim Mulkey have produced a site that is viewed as useful and easy to navigate and their dedication of their time and effort has been greatly appreciated but not always recognized. We need to begin an examination of whether how we do business with the website is still viable. Many members of the organization may not be qualified to handle the technical challenges of maintaining a website. The result is that either a few highly dedicated volunteers have to make long-term commitments to the organization or the turnover of volunteers results in inconsistencies in the structure and style of the website. We need to examine whether we should continue maintaining the website internally or if we should pay for the website to be maintained by an outside organization.

Annual Meeting

The annual meeting is consistently rated as one of the most valuable services provided to ACUBE members with over two-thirds of the members having been to at least one meeting.

Attendance has been slowly declining for the past several years, however. For many members the decline may be because of issues such as declining professional development funds or a lack of time.

Suggestions from the membership survey were wide-ranging with many ideas that would be easy to implement immediately and many that will require extensive study before implementation. Laura Salem, the Program Chair for 2008, has already started implementing changes in the types of presentations. The 1.5 hour workshops were viewed as least useful and will likely decline over time. One of the highly rated possible additions to annual meetings has already appeared. The majority of members had favorable opinions of roundtable discussions. One roundtable discussion spontaneously developed at the 2007 Annual Meeting at Loras College, but six discussions occurred at the 2008 meeting at Hopkinsville Community College. The roundtable discussions were popular with attendees at the recent meeting and coordinators of those discussions were encouraged to submit synopses to *Bioscene*.

Long-term changes in the meeting will be more challenging. A discussion regarding the locations of meetings has been ongoing for several years in the Steering Committee. We have traditionally located meetings along the corners and in the center of the core area of the membership. Having a meeting in a large city outside the Midwest has been discussed for several years within the Steering Committee. While cost has been a major concern, the idea does merit further examination. Suggestions about meeting locations that were more strongly supported in the survey will be more easily addressed. The 2008 (Hopkinsville, KY) and 2009 (Kansas City) meetings will alternate between small and large cities, a suggestion supported by over 60% of the survey respondents.

A final long-term issue that will require further study is the timing of the annual meeting. We have traditionally held the annual meeting during the fall break of the host institution. Perhaps it is time to give full consideration to holding the meeting at other times of the year. This would reduce unintentional conflicts like the conflict this year with the NABT meeting, but more importantly would allow us to consider holding joint meetings with other societies. Members have suggested holding meetings with ABLE, various state Academies of Science, or research societies such as the Southeastern Association of Naturalists. Joint meetings would have the added benefit of exposing our group to a larger pool of potential new members.

Advocacy

ACUBE is the only organization of its type, an association devoted entirely to improving biology education at the college/university level. Since this is our sole purpose, it seems like we should have a larger role in education at the national level. Going back through old issues of *Bioscene* and the AMCBT newsletters, it becomes clear that this has been a topic of concern for decades.

Tom Davis, Executive Secretary, and Conrad Toepfer, President, attended an educational summit in Washington, D.C., that was jointly sponsored by NSF, AAAS, and Sigma Xi. The intention of the summit was to begin a dialogue about the potential to develop a national-level biology curriculum, similar to the standards in chemistry established by the American Chemical Society. Attendees at the summit represented at least 30 different societies. While many representatives were from educational subcommittees of research-oriented societies, the only societies that were specifically focused on teaching were ACUBE and NABT. Two factors became evident during the summit: (1) ACUBE is resource-poor compared to the other societies, and (2) NABT has already spent a considerable amount of time and resources on developing a standard curriculum. While we may be able to collaborate with NABT on this particular issue, it will be difficult at this time for ACUBE to have much of a national voice. For example, one educational subcommittee of a professional society has an annual budget 2-3 times higher than ours, has paid staff, and has a \$10 million endowment.

An organization such as ours depending entirely on volunteers and with a break-even annual budget will have difficulty competing for attention at events like the recent summit. While we have a valid mission, we need a serious examination of what we

want to be doing in terms of education advocacy. We also need to consider our financial limitations and perhaps start looking for additional collaborations or funding opportunities.

It is clear from the membership survey that there are many things that ACUBE has been doing well and many things that our members find highly rewarding. It is also equally clear that there are many things that we can be doing differently, some easy to accomplish, some more difficult. The organizers of the 2008 meeting and the Steering Committee have already implemented some of the easier suggestions. The more difficult suggestions will necessitate further study and incorporation into a Strategic Plan. After examining results from this survey, the Steering Committee has proposed four goals for the Strategic Plan: (1) Lead the academic agenda in biology education, (2) Modernize the face of ACUBE, (3) Develop a plan to increase membership, and (4) Create an atmosphere where creativity and new ideas are encouraged. Members of the Steering Committee have been assigned to each of these goals and will be developing objectives and tasks to fulfill those objectives over the coming year. Any member, however, is more than welcome to volunteer to participate in development of any of the four main goals (contact conrad.toepfer@brescia.edu if interested).

The President and Steering Committee of ACUBE are committed to looking ahead and planning for the future of the society. ACUBE has provided a great service to its members and has had an impact on biology education in its first 52 years. We should continue that tradition and look to expand our impact in the next half century. Changes have already occurred but stay tuned for even more to come!

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